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NEW SPECIES OF PTYCHOPTERIDAE (DIPTERA). PART II.

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The first part under this general title was published in 1937 (Bull. Brooklyn Ent. Soc., 32: 140-143). In the present paper I wish to describe two new species from the Pacific Northwestern United States and to furnish records of distribution concerning certain little-known species within the Nearctic fauna. The types of the novelties are preserved in my extensive collection of Tipuloidea.

Ptychoptera townesi sp. n.

General coloration polished black, the scutellum obscure yellow; antennae (male) relatively short; femora yellow, the tips blackened, the amount subequal on all legs; wings with a weak brown tinge, very restrictedly patterned with brown; macrotrichia of cells unusually numerous, including most of cells *C*, *R* and *M*, and the distal third of cells *Cu* and *A*, in addition to the cells beyond the cord; male hypopygium with the dististyle trilobed, the outer lobe longest, pale; at base of dististyle with a powerful black spine arising from a strong, setiferous basal tubercle.

Male.—Length, about 7.5-8 mm.; wing 8.5-9 mm.; antenna about 4 mm.

Rostrum broadly darkened medially above, the sides obscure yellow, in cases more uniformly darkened; mouthparts yellow; palpi yellow, the terminal segment passing into black. Antennae of moderate length; scape and pedicel dark reddish brown, flagellum black; flagellar segments cylindrical; verticils shorter than the segments. Head polished black; anterior vertex wide.

Pronotum obscure yellow. Mesonotum polished black, including the parascutella; scutellum obscure yellow; pleuroter-

gite with a restricted obscure yellow area on cephalic-dorsal portion, behind which is an area of silvery setae. Pleura black, conspicuously gray pruinose, more heavily so on mesepimeron; dorsopleural membrane buffy yellow. Halteres yellow, knobs weakly infuscated. Legs with the fore and middle coxae yellow, the posterior pair blackened, sparsely pruinose; trochanters yellow; femora light yellow, the tips somewhat extensively blackened, including about the distal sixth or seventh; fore and middle tibiae chiefly infuscated, the posterior pair more yellowish, with blackened tips; tarsi black. Wings with a weak brown tinge; prearcular field and costal border more yellowish; very restricted brown seams on cord and at forks of R_{1+2} and R_{4+5} ; fork of M_{1+2} scarcely clouded; veins brown, more yellow in the brightened basal and costal portions and including vein Cu_2 . Macrotrichia of cells unusually abundant and well-distributed, involving not only the cells beyond cord, as is common in the genus, but also extensive series for virtually the whole length of cells C , R and M , as well as the distal third of cells Cu , and A . Venation: $r-m$ about two-thirds its length before fork of R_s , the basal section of the latter about three times $r-m$ alone; fork of $M_{1,2}$ small.

Abdomen black, including the hypopygium; apex of outer lobe of dististyle of latter whitened. Male hypopygium of moderate size. Ninth tergite transverse, the caudal margin with a deep U-shaped notch, the lateral lobes stout, their tips obliquely truncated, with an inwardly-directed blackened lobule at the inner mesal angle. Dististyle conspicuously trilobed, the outer lobe longest, flattened, the two inner lobes darkened, more or less oval in outline; at base of style with a very strong, powerful, blackened spine, directed inward, its basal tubercle stout, provided with several scattered setae.

Habitat.—Washington.

Holotype, ♂, Elbe, July 13, 1940 (H. & M. Townes). *Paratopotype*, ♂.

I am privileged to name this interesting species in honor of Dr. and Mrs. Henry K. Townes, who collected the type material. The closest ally is *Ptychoptera pendula* Alexander, of the central and northern Rocky Mountains, which has the head and thorax similarly highly polished black. This latter species differs from the present fly in the more restricted macrotrichia of the cells of the wing and in the very different structure of the male hypopygium, especially of the dististyle.

Ptychoptera pendula Alexander.

Described from various stations in Colorado. Additional records:

British Columbia: Fernie, June 5, 1934 (H. B. Leech).

Utah: Lodge Forest Camp, Logan Canyon, altitude 4,800 ft., June 30, 1942 (C. P. Alexander).

Ptychoptera metallica Walker.

Described from St. Martin's Falls, Albany River, Hudson Bay. According to Dr. James Fletcher (in Aldrich's, Catalogue of the North American Diptera, p. 66; 1905), this station is now called Martin's Falls and is located at Latitude $51^{\circ} 30'$; Longitude $86^{\circ} 30'$, which is about 200 miles north of the northern arch of Lake Superior. Later the species was recorded from various stations in Alberta. The following is the first record for the United States:

Minnesota: Cushing, Morrison Co., June 26, 1940 (H. D. Pratt).

Ptychoptera sculleni sp. n.

General coloration yellow, the praescutum with three separate black stripes, the lateral pair prolonged backward onto the scutal area; pleura yellow, patterned with black, especially on the ventral sclerites; wings brownish yellow, restrictedly patterned with brown; male hypopygium unusually large and complex, the very elongate lobes of the tergite and the branches of the dististyle whitened, contrasting with the blackened remainder of the hypopygium.

Male.—Length about 10.5–11 mm.; wing 9.5–10.5 mm.; antenna about 6–6.5 mm.

Female.—Length about 13 mm.; wing 11.5 mm.; antenna about 3.5 mm.

Rostrum and palpi yellow, the terminal segment of the latter infuscated. Antennae with scape and pedicel yellow; in male, the first segment of flagellum yellow basally, darkened at apex, in female uniformly darkened; succeeding flagellar segments uniformly brownish black; flagellar segments cylindrical, the verticils much shorter than the segments in male, subequal to the segments in female. Head black above, the surface subnitidous; anterior vertex wide.

Pronotum light yellow. Mesonotal praescutum and scutum yellow, with three black stripes that are distinctly separated by the narrow yellow interspaces; lateral stripes constricted and impressed before midlength, on the scutum bent more toward the midline, leaving the central area of the latter yellow; scutel-

lum yellow; postnotum yellow, the posterior third or more of the mediotergite covered by two large confluent blackened areas; pleurotergite yellow, narrowly blackened on ventral portion above the halteres. Pleura yellow, extensively blackened on ventral portion, including the sternopleurite and ventral epimeral region; smaller but conspicuous black spots on propleura, anepisternum and along the suture between the anepisternum and pteropleurite. In the female, the ventral black pleural areas are even more extensive, involving almost all the sternopleurite and much more of the ventral mesepimeron. Halteres with stem yellow, knob infuscated. Legs with all coxae uniformly pale yellow; trochanters yellow; femora yellow, the tips narrowly blackened, the amount subequal on all legs; tibiae and basitarsi obscure yellow, their tips darkened; terminal tarsal segments uniformly blackened. Wings brownish yellow, the prearcular field and costal border slightly more yellow; cord very narrowly seamed with brown; small brown spots at forks of Sc , R_{4+5} and M_{1+2} ; veins brown, more yellow in the brightened fields. Venation: $r-m$ some distance before fork of Rs , opposite or before the fork of M .

Abdominal tergites (male) obscure brownish yellow, the basal and intermediate segments ringed with brown; in the holotype, the dark color is more extensive, restricting the paler color; sternites more uniformly yellow; male hypopygium black, the outer tergal lobes and the dististyle abruptly whitened. Male hypopygium very large. Ninth tergite with a deep V-shaped notch, the lateral lobes produced caudad and ventrad into very long, pale, fingerlike points; viewed from the side these lobes are seen to be more expanded at their tips and with a conspicuous ventral tooth at near midlength. Dististyle very complex, pale basally, deeply trilobed; a long slender lobe directed chiefly dorsad, a smaller curved lobe directed mesad, and a more flattened blade directed ventrad, all whitish in color. Ninth sternite conspicuously tumid, more or less hood-shaped. In the female, the abdominal tergites are blackened, the caudal borders very narrowly pale; sternites obscure yellow.

Habitat.—Washington, Oregon.

Holotype, ♂, Elbe, Washington, July 18, 1940 (H. & M. Townes); Alexander Collection. *Allotopotype*, ♀, July 15, 1940; U.S.N.M. *Paratypes*, 1 ♂, Alsea, Oregon, May 23, 1931 (H. A. Scullen); Department of Entomology, Oregon Agricultural Experiment Station, Corvallis; 1 ♂, 1 ♀, Cascadia, Oregon, August 11, 1924 (H. A. Scullen).

I am very pleased to name this unusually distinct *Ptychoptera* in honor of Professor Herman A. Scullen, Department of Entomology, Oregon Agricultural Experiment Station, who has added very materially to our knowledge of the Oregon Tipuloidea. The species is very distinct from all others previously defined, differing especially in the very peculiar structure of the male hypopygium.

Bittacomorphella sackeni (Röder)

Described from Nevada. The following records indicate the range of the species.

British Columbia: Queen Charlotte Island; Stanley Park, Vancouver, flying beside a stream, September 3, 1930 (H. B. Leech).

Washington: Mount Rainier, July 21, 1940 (H. & M. Townes); Ashford, August 18, 1940 (H. & M. Townes).

Oregon: Hood River, June 6, 1917 (F. R. Cole); Alsea Mt., Benton Co., May 26, 1934 (H. A. Scullen); Cascadia, August 12, 1924 (H. A. Scullen).

California: Fieldbrook, May 18, 1903 (H. S. Barber); U.S. N.M.; Eureka, May 22, 1903 (H. S. Barber); U.S.N.M.; Humboldt Co. (William Hoquiam); U.S.N.M.

In the United States National Museum there is a specimen labelled "Burke, Col." upon which record is based the published account of the occurrence of the fly east of the Great Basin. I can find no "Burke" in any Atlas of Colorado and it is preferable to omit this record until it is further confirmed.

Bittacomorpha clavipes (Fabricius)

This species has an unusually wide range in eastern and central North America. It is of interest to record the most westerly records so far discovered.

Wyoming: Moran, near Pilgrim Creek, Grand Teton National Forest, altitude 6,800 ft., July 5, 1942 (C. P. Alexander).

Colorado: Manitou Park, July-August (F. H. Snow); University of Kansas; Monarch Pass, altitude 10,500 ft., July 1, 1934 (C. P. Alexander); Pingree Park, August 13, 1934 (C. W. Sabrosky).

Utah: Garden City, August 25, 1938 (Knowlton & Hardy).

Bittacomorpha occidentalis Aldrich

Apparently restricted to the Vancouverian Region and nowhere over-lapping the known range of the preceding species.

Washington: Mount Rainier, July 8, 1940 (H. & M. Townes); Ashford, August 18, 1940 (H. & M. Townes).

Oregon: Hood River, June 3, 1917 (F. R. Cole); Cascadia, June 30, 1939, August 12, 1924 (H. A. Scullen); Linn Co., August 14, 1929 (J. E. Davis).

California: Fieldbrook, May 18, 1903 (H. S. Barber); Eureka, May 22, 1903 (H. S. Barber).

It appears that the range of this fly is almost identical with that of *Bittacomorphella sackeni* (Röder).

NOTES ON APODEMIA (F. & F.) AND OTHER SOUTHERN BUTTERFLIES OCCURRING IN NORTHERN CALIFORNIA.

BY ROBERT GRANT WIND, Berkeley, Calif.

During the past twelve years, I have noticed with interest that captures of Southern butterflies in Northern California have occurred with increasing regularity. Several species seem to have established themselves and now breed locally. Most of these species are as yet found only in isolated colonies.

Typical *Apodemia mormo* (F. & F.) have been taken near Pacific Grove (M. Deudoroff) Pine Crest, Strawberry Lake in the Sierras (R. G. Wind) and Mount Diablo, Contra Costa County (R. G. Wind) Mr. Harry Lange also reports an *Apodemia* from Lake County which I have not yet seen.

Aside from typical *mormo*, we have an interesting sub-species from the sand dunes of Antioch which has been named *Apodemia mormo langei* (Comstock). It seems rather strange that a sub-species such as *langei* could exist only 20 miles from typical *mormo* without intermingling. I have a long series of *langei* from Antioch and find them very constant.

From Mitchel's Canyon on Mount Diablo, I have a good series of *mormo*, typical in every respect. These, too, are constant in markings and nothing which could be mistaken for a *langei* has been found on Mount Diablo.

During the Fall of 1940, from August until December, *Phoebis sennae lubule* (L.) fairly swarmed in the streets of Berkeley. Reports of its presence were also received from Oakland, San Francisco, Marin County, and Santa Clara County. No doubt it reached even further north. All specimens captured were in fresh condition, indicating local breeding. Students at San Jose State College found and reared larvae at San Jose which proved beyond